IN THE CLAIMS:

The listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Previously Presented) An optical fiber microlens that has a core and cladding and at the tip an anamorphic means of convergence, in which at the optical fiber tip that faces the light source or radiated beam a first pair of inclined surfaces is formed in a positional relationship such that they intersect in a wedge shape,

on the axis of a plane perpendicular to the axis of the optical fiber along the center of the core are formed second inclined surfaces at the angle θ to a plane perpendicular to the central axis of the optical fiber and lengthwise to the wedge-shaped tip, and

wherein the tip of the optical fiber microlens is processed as a curved surface, in which the curved surface is a portion of an elliptical surface, and one major axis of the elliptical surface matches the central axis of the core .

2. (Canceled)

3. (Previously Presented) An optical fiber microlens that has a core and cladding and at the tip an anamorphic means of convergence, in which at the optical fiber tip that faces the light source or radiated beam a first pair of inclined surfaces is formed in a positional relationship such that they intersect in a wedge shape,

on the axis of a plane perpendicular to the axis of the optical fiber along the center of the core are formed second inclined surfaces at the angle θ to a plane perpendicular to the central axis of the optical fiber and lengthwise to the wedge-shaped tip, and wherein the tip of the optical fiber microlens is processed as a curved surface, in which the intersection of the curved surface with each of two perpendicular planes that contain the central axis of the core is an arc, each with a specified radius.

4. (Previously Presented) An optical fiber microlens as described in claim 1 or 3 above, in which the curved surface is on the core portion of the tip and the cladding portion has planes that extend from the curved surface and that are symmetrical with respect to the

central axis.

5. (Previously Presented) An optical fiber microlens as described in claim 3 above, in which the ratio of the curvature radii of the arcs is between 1.2 and 3.8.

6. (Previously Presented) An optical fiber microlens as described in claim 3 above, in which the ratio of the curvature radii of the arcs is between 1.8 and 2.4.

7. (Previously Presented) An optical fiber microlens as described in claim 3 above, in which the ratio of the smaller of the curvature radii of the arcs to the core radius is between 1.3 and 2.6.

8. (Previously Presented) An optical fiber microlens as described in claim 3 above, in which the ratio of the smaller of the curvature radii of the arcs to the core radius is between 1.6 and 1.9.

9. (Previously Presented) A method of positioning an optical fiber in which, when the light beam that enters from a given light source forms an elliptical flat shape on the plane that is in contact with the tip of the optical fiber, the optical fiber is positioned by rotating the axis so that the central axis of the core matches the direction of travel of the centerline of the light beam, and a line tangent to the largest curvature in the core tip is perpendicular to the long direction of the elliptical flat shape.